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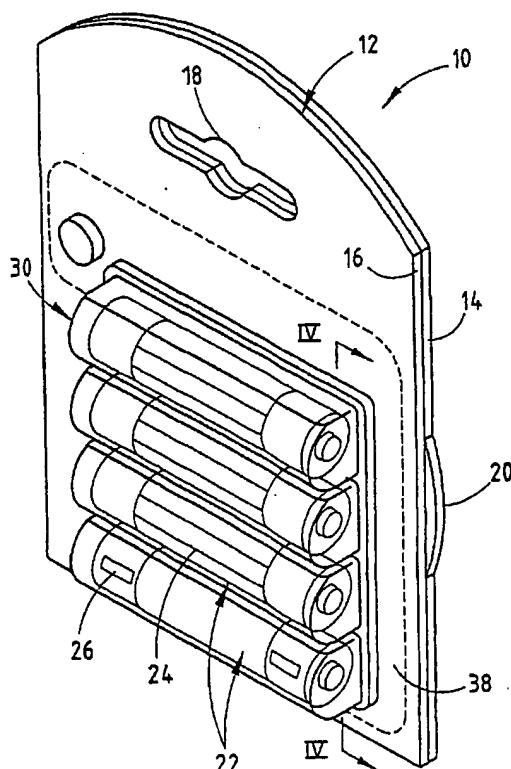
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(54) Title: **PRODUCT DISPLAY PACKAGE WITH ROTATION PREVENTION**



(57) Abstract: A product display package that houses generally cylindrical products, such as batteries, and prevents rotation of the products. The product display package comprises a container having a housing defining a compartment adapted to house products. The container includes a plurality of parallel pockets having a length and width and each configured to receive a product. The width is generally undersized relative to the product. The container further includes a compression wall formed between each of the adjacent pockets. The compression wall compresses products that are inserted into the pockets so as to hold the products in place and prevent rotation of the products.

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PRODUCT DISPLAY PACKAGE WITH ROTATION PREVENTION

BACKGROUND OF THE INVENTION

The present invention generally relates to packages for displaying products for sale and, more particularly, to a display package for containing cylindrical products, such as batteries, for display to consumers while preventing rotation of the products within the package.

A common practice for packaging and displaying small and lightweight retail items, such as cylindrical alkaline batteries, is to package the items in thermoformed blister packages and place the packages on shelves or hang the packages on hooks on various display racks. Conventional battery packages are generally composed of a display card which provides a generally stiff supportive backing, usually composed of cardboard, and a thermoformed polymeric blister that is bonded or otherwise attached to the display card. The display card provides support for displaying the merchandise for sale and usually contains print with suitable indicia, such as advertising, trademarks, and instructions.

With battery display packages, batteries of the same size are commonly made available to consumers for purchase in a package containing a predetermined number of batteries. The batteries are displayed and sold in blister-type packages which usually contain two, four, or eight batteries commonly packaged in each display package. In accordance with one battery packaging approach, the thermoformed blister generally comprises a piece of transparent polymeric material, e.g., plastic, heat sealed to the front side of the display card. According to another approach, a clam-type thermoformed polymeric blister generally having a shape to

fit over and cover the batteries is supported on the cardboard display card. The clam-type polymeric blister typically has two pieces, each having a peripheral flange glued between the two layers of the cardboard of the display card. The blister isolates the product from the purchaser and prevents inadvertent damage to the product that can result from repeated handling prior to sale. Moreover, the blister
5 allows for the orderly display of products for sale to purchasers.

In order to maximize marketability of the product, it is desirable to orient some products, such as cylindrical alkaline batteries, within the blister package so that the graphics printed on the product label are readily recognized and appear more attractive to consumers, especially when the products are packaged in clear
10 (transparent) blister packages. In the past, some battery packaging techniques have employed a registration mark on each battery so that the batteries can be disposed in the blister package in a desired orientation so as to maximize display of the label print. However, once oriented in the blister package, the batteries should be retained
15 in the desired orientation, and therefore rotation of batteries should be prevented.

One approach for packaging batteries in a blister package and preventing rotation of the batteries is disclosed in U.S. Patent No. 5,311,989. The aforementioned patent discloses employing protrusions formed in the end walls of the blister pockets that engage the positive and negative terminals of the batteries to
20 prevent rotation of the batteries within the package, and further allows for engagement of batteries which may have varying sizes. The aforementioned approach requires complex retention features formed in the end walls of the pockets

which may complicate the blister manufacturing process. Additionally, the retention features may be susceptible to excessive deformation.

Accordingly, there is a need, heretofore unfulfilled, for a product display package for displaying cylindrical products for sale to consumers while preventing rotation of the products. It is particularly desirable to provide for a battery display blister package that houses cylindrical batteries while preventing rotation of the batteries so as to maximize display of the label print indicia to consumers.

SUMMARY OF THE INVENTION

10 The present invention provides for a product display package that houses generally cylindrical products and prevents rotation of the products within the package. To achieve this and other advantages, and in accordance with the purpose of the present invention as embodied and described herein, the present invention provides for a product display package comprising a container having a housing
15 defining a compartment adapted to house products. The container includes a plurality of substantially parallel pockets, each having a length and a width and configured to receive a generally cylindrical product. The width of the pockets is generally undersized relative to the products. The container further includes a compression wall formed between adjacent pockets. The compression wall
20 compresses when products are inserted into the pockets so as to hold the products in place and prevent rotation of the products.

These and other features and advantages of the present invention will be further understood and appreciated by those skilled in the art by reference to the following specification, claims and appended drawings.

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BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a front perspective view of a battery display blister package according to one embodiment of the present invention;

FIG. 2 is an exploded view of the package showing removal of the blister
10 container from the display card;

FIG. 3 is a perspective view of the blister container shown in an open position;

FIG. 4 is a cross-sectional view of the blister package taken through lines IV-IV of FIG. 1;

15 FIG. 5 is a front perspective view of a battery display blister package according to another embodiment of the present invention;

FIG. 6 is a perspective view of the blister container of FIG. 5 without the display card; and

FIG. 7 is a cross-sectional view of the blister package taken through lines
20 VII-VII of FIG. 5.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

For purposes of description herein, the terms "upper," "lower," "right," "left," "rear," "front," "vertical," "horizontal" and derivatives thereof shall relate to the invention as oriented in FIGS. 1 and 5. However, it is to be understood that the invention may assume various alternative orientations and step sequences, except
5 where expressly specified to the contrary. It is also to be understood that the specific devices illustrated in the attached drawings, and described in the following specification are simply exemplary embodiments of the inventive concepts defined in the appended claims. Hence, specific dimensions and physical characteristics relating to the embodiments disclosed herein are not to be considered as limiting,
10 unless the claims expressly state otherwise.

Referring to FIG. 1, a product display package 10 is shown packaging a plurality of cylindrical batteries, such as AA-size batteries 22, for display and sale to consumers in a retail store according to one embodiment. The product display package 10 shown houses four cylindrical AA-size batteries 22, according to one
15 example, in a combination display card and reclosable blister merchandise container. While a battery blister package is shown and described herein, it should be appreciated that the present invention provides a product display package that may house generally cylindrical products of various sizes and numbers, which may include batteries as well as other types of products, without departing from the spirit
20 of the present invention.

The product display package 10 includes a display card 12 having a substantially planar main body, and a polymeric blister merchandise container 30 supported by the display card 12. The display card 12 is made up of two layers of

material, including a rear layer of cardboard 14 bonded to a front layer of cardboard 16. Layers 14 and 16 may include two separate sheets of cardboard substantially similarly shaped and bonded together via glue. Alternatively, layers 14 and 16 may be formed from a single sheet of cardboard that is folded along one edge, such as the lower edge, and pressed and bonded together. Display card 12 generally includes a lower edge, two vertical side edges on the left and right sides, and a rounded upper edge. Formed near the upper edge of display card 12 is a cutout aperture 18 which allows the display card 12 to be hung from a hook on a display rack. In addition, the display card 12 may contain print with indicia such as advertising, trademarks, and instructions, as is commonly practiced in the art.

The merchandise container 30 as shown in this embodiment is a reclosable and reusable transparent thermoformed blister container that houses battery products. The merchandise container 30 has a peripheral flange 38 formed around a perimeter of the main housing compartment and extending radially outward. The peripheral flange 38 is sandwiched between the rear and front layers 14 and 16, respectively, of display card 12. Merchandise container 30 extends through an aperture formed in the front layer, or alternately in both the front and rear layers 14 and 16, of display card 12. The peripheral flange 38 is sandwiched between rear and front layers 14 and 16, and may or may not be bonded to the display card 12. Accordingly, merchandise container 30 is trapped in place between the front and rear layers 14 and 16 of display card 12 prior to the display card 12 being torn open.

The product display package 10 is further shown in FIG. 2 with the blister merchandise container 30 removed from the display card 12. According to one

example, a tab 20 may be torn along perforations in the rear layer 14 of display card 12 to allow for removal of container 30 from display card 12. As shown, each of the batteries 22 is oriented in a desired orientation within the blister container 30. The batteries 22 may be oriented and disposed within the blister container 30 in accordance with known orientation techniques. The blister merchandise container 30 fixedly holds each of the batteries 22 in place to prevent movement of the batteries 22 relative to the blister container 30 following package assembly. Accordingly, each of the batteries 22 may remain oriented in a desired orientation to provide a battery package 10 that is aesthetically pleasing to consumers and has the maximum positive impact on consumers.

Each of the batteries 22 shown generally has a steel can containing electrochemically active materials. The battery can generally has a closed bottom end, cylindrical side walls and an open top end sealed closed with a cover and seal assembly as is well-known in the battery manufacturing art. The battery also has a label applied to the outer cylindrical walls of the can as is generally known in the battery art. The battery label preferably includes print containing suitable indicia, such as advertising, trademarks, and instructions, and may further include a battery tester, as shown by reference numeral 26, or other viewable features. A substantial amount of space on the battery label may contain print so as to maximize use of the battery label space to advertise the product and provide packaged products that are aesthetically pleasing to consumers. It is desirable to orient the batteries 22 to display certain features on the label. For example, some of the batteries may be oriented to display the brand name and logo in the region identified by reference

numeral 24, while one or more batteries 22 may be oriented to display the battery tester 26. The package 10 of the present invention prevents the batteries 22 from rotating from the orientation of the batteries as packaged.

The blister merchandise container 30 is further shown in FIG. 3. The merchandise container 30 includes front base housing 34 and a rear lid 36 connected via an integrally formed hinge 40 that allows for pivoting of the lid 36 relative to the base housing 34. Rear lid 36 has a partially planar rear surface 42 that is substantially flush mounted against the rear layer 16 of display card 12. Integrally formed in the rear lid 36 is a generally rectangular upstanding wall 44 which defines a cavity with compartment pockets 46 formed therein for receiving the upper surface of generally cylindrical products, such as batteries.

The front base housing 34 has a partially planar member 55 with a generally rectangular recessed wall 54 that forms molded front compartment pockets 52 which, together with rear compartment pockets 46, contain products therein. Compartment pockets 52 form an outward protruding surface and substantially conform to the size and shape of the products, such as batteries 22. The planar members 42 and 55 are intended to be flat against one another around the perimeter area when the merchandise container 30 is closed. In addition, the rear lid 36 has a round, disk-like, protruding male member 48 adapted to fit into rectangular female receptacle 58 formed in front base housing 34. Together, the round male member 48 and rectangular female receptacle 58 form a snap-fit closure. It should be appreciated that the upstanding wall 44 is generally rectangular and is adapted to be received by generally rectangular recessed wall 54 to form an interference fit closure

of the container 30. The addition of the snap-fit closure provides an added means of closure and also serves as an identifier to let consumers know that merchandise container 30 is reclosable and reusable. The merchandise container 30 may be configured with the interference fit closure between the front base housing 34 and
5 rear lid 36, with or without the snap-fit closure 32.

The front base housing 34 of merchandise container 30 includes a plurality of substantially parallel pockets 52, such as the four pockets shown for holding four AA-size batteries, respectively. The pockets 52 are generally formed each having a length and a width configured to receive a corresponding battery 22. The width of
10 each pocket 52 is generally undersized relative to the battery 22. The front base housing 34 further includes compression walls 60 formed between adjacent pockets 52. The compression walls 60, according to one embodiment, are formed near each end of the pockets 52 such that two compression walls 60 are configured to compress against the cylindrical side walls of a battery 22 disposed in the
15 corresponding pocket 52. Accordingly, the compression walls 60 provide a radial compression fitting near opposite ends of the battery 22. It should also be appreciated that the compression walls 60 may be located at various other locations in the side walls of the pockets 52, and may extend the entire length of the pockets 52. The compression walls 60 are integrally formed of blister material which
20 compresses when batteries 22 are disposed in the adjacent pockets 52. By providing the width of the pockets 52 undersized relative to the products and employing the compression walls 60, the pockets 52 receive batteries 22 and provide an interference fit to prevent rotation of the batteries 22 once disposed in the pockets

52. Accordingly, rotation of the batteries 20 is prevented so as to maintain the desired packaged orientation for display to consumers.

Referring to FIGS. 5-7, another embodiment of the product display package 10' is shown having a blister container 30' heat sealed to the front surface of a display card 12'. The blister container 30' provides a compartment containing undersized pockets 52' having compression walls 60 formed between adjacent pockets 52' for receiving batteries 22 and compressing against the batteries 22 to provide an interference fit that is similar to the engagement of batteries in pockets 52' in the front base housing 34 as set forth in the embodiment shown in FIG. 1. However, the blister package 10' is heat sealed along peripheral flange 55' against the display card 12' such that the display card 12' closes the compartment. The display card 12' preferably contacts batteries 22 to further resist rotation of batteries 22.

Additionally, it should be appreciated that a friction surface may be employed on the inside surface of the pockets 52 or 52' to further prevent the rotation of products within the pockets 52 or 52'. Alternately, or in addition, a friction surface may be provided on the batteries 22 to prevent rotation within the pockets 52 or 52' of the blister package 10 or 10'. Accordingly, the addition of a friction surface further enhances the anti-rotation feature of the present invention.

Accordingly, the blister package 10 or 10' of the present invention advantageously displays products for sale to consumers, while preventing rotation of the products within the package. As a consequence, products can be oriented in a desired orientation to prominently display features found on the products and

maintain orientation through shipping and handling prior to purchase by consumers. While the embodiments disclosed herein provide for a battery package, it should be appreciated that various other blister packages may employ the present invention to prevent rotation of various cylindrical or round products contained therein.

5 It will be understood by those who practice the invention and those skilled in the art, that various modifications and improvements may be made to the invention without departing from the spirit of the disclosed concepts. The scope of protection afforded is to be determined by the claims and by the breadth of interpretation allowed by law.

The invention claimed is:

1. A display package for retaining products having a generally cylindrical wall, said package comprising:

a container having a housing defining a compartment adapted to house product, said compartment including a plurality of substantially parallel pockets each
5 having a length and a width and configured to receive a product, wherein said width is generally undersized relative to said product, and said compartment further includes a compression wall between adjacent pockets, wherein said compression wall compresses when product is inserted into one or more of the pockets so as to hold the product in place and prevent rotation of the product.

2. The package as defined in claim 1, wherein said container comprises a transparent blister package.

3. The package as defined in claim 1, wherein said compression walls comprise a first compression wall located near a first end of said pockets.

4. The package as defined in claim 3, wherein said compression wall further comprises a second compression wall located near a second end of said pockets.

5. The package as defined in claim 1, wherein said container further comprises a closable lid fit to engage said housing and close said compartment.

6. The package as defined in claim 1 further comprising a display card having a main body integrally formed to engage and support said container.

7. The package as defined in claim 6, wherein said container is heat sealed to the display card.

8. The package as defined in claim 6, wherein said package comprises a closable lid fit to engage the housing and said container is trapped between two layers of said display card.

9. The package as defined in claim 1, wherein said package contains a plurality of generally cylindrical batteries.

10. The package as defined in claim 1, wherein said housing is generally rectangular.

11. A display package for retaining generally cylindrical products for display, said package comprising:

a container having a housing defining a compartment adapted to house products, said compartment including a plurality of pockets extending parallel to
5 each other, said container further having compression walls formed between adjacent pockets;

a plurality of products generally having a cylindrical wall, each of said products disposed in one of said pockets such that each product is compressed against the compression walls so as to hold the product in place and prevent rotation;

10 and

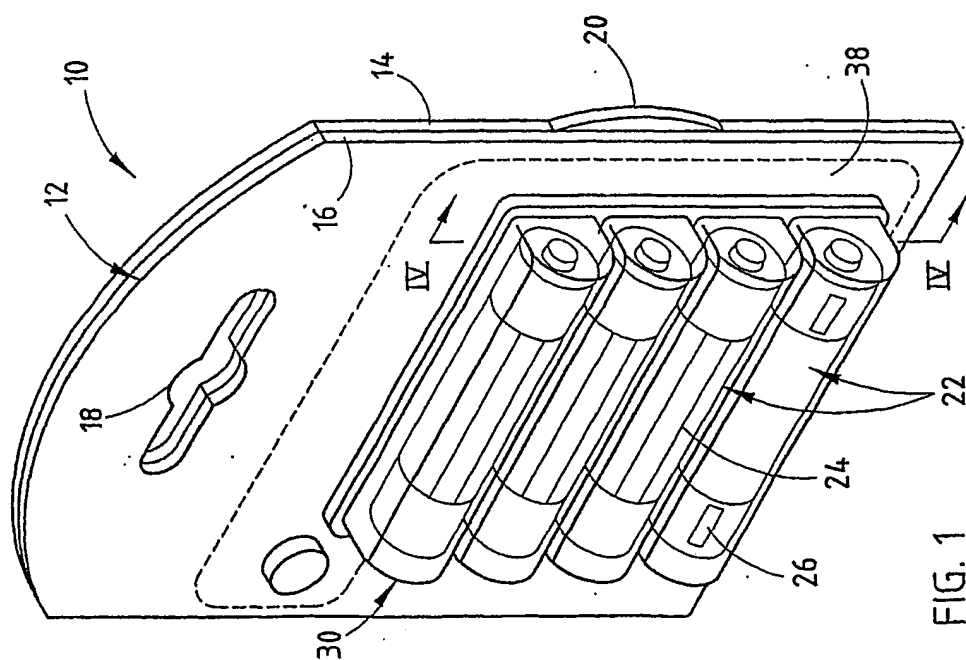
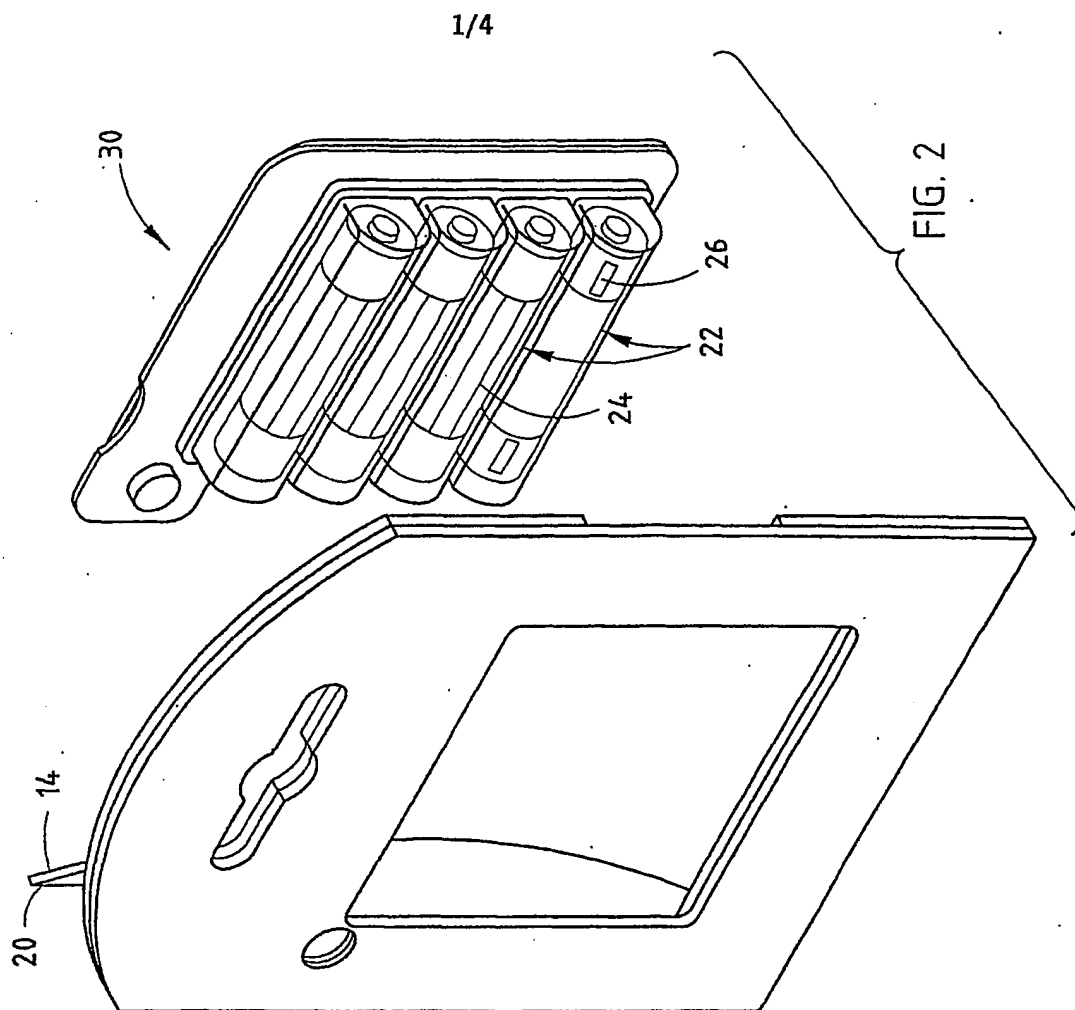
a display card having a main body integrally formed to engage and support said container.

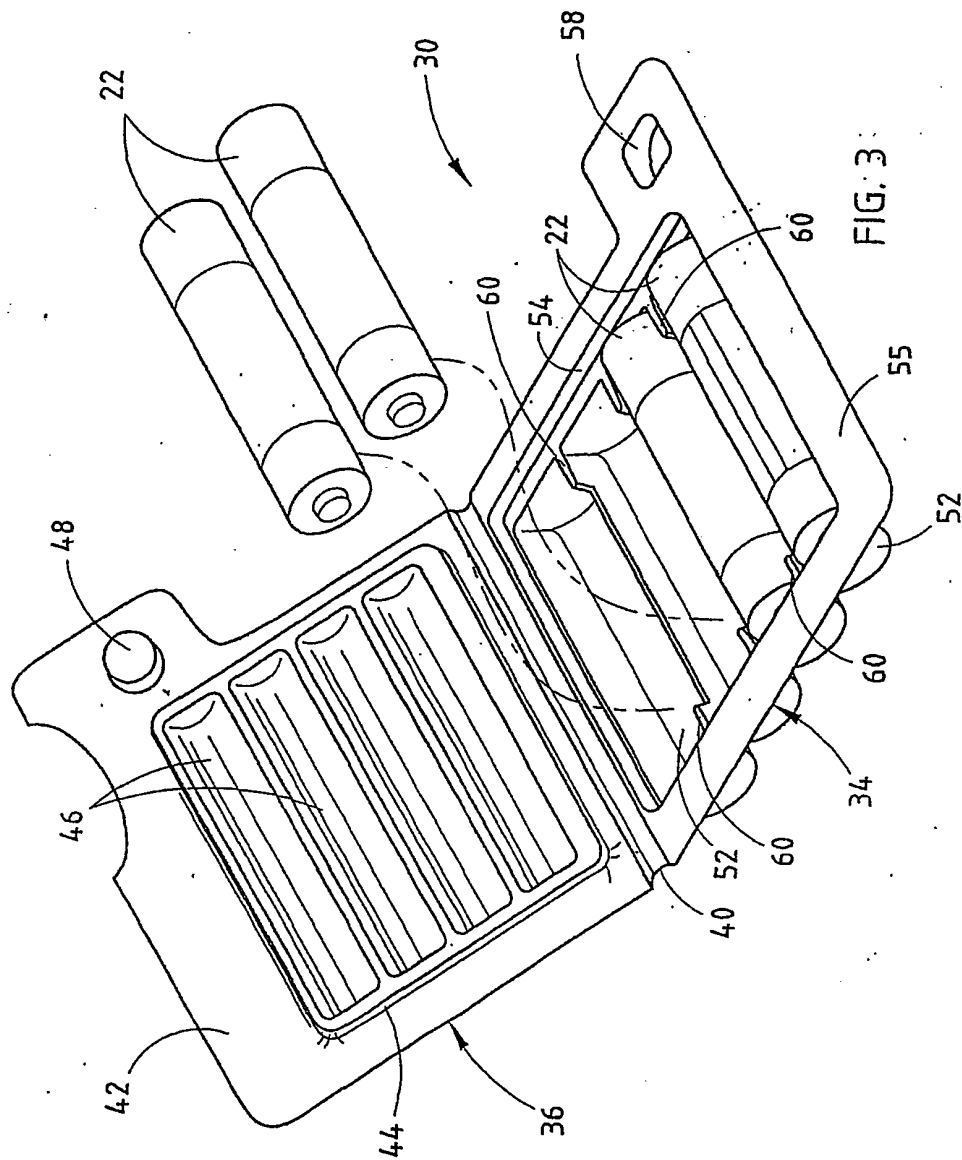
12. The package as defined in claim 11, wherein said product comprises a plurality of generally cylindrical batteries.

13. The package as defined in claim 11, wherein said container comprises a transparent blister package.

14. The package as defined in claim 11, wherein said compression walls comprise a first compression wall located near a first end of said pockets.

15. The package as defined in claim 14, wherein said compression wall further comprises a second compression wall located near a second end of said pockets.





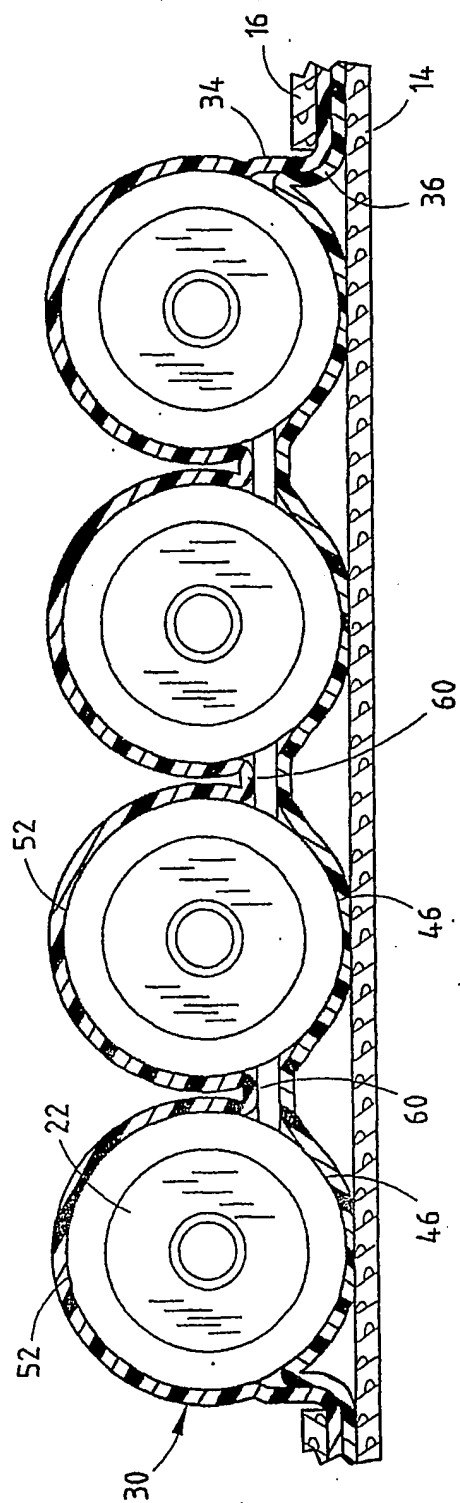


FIG. 4

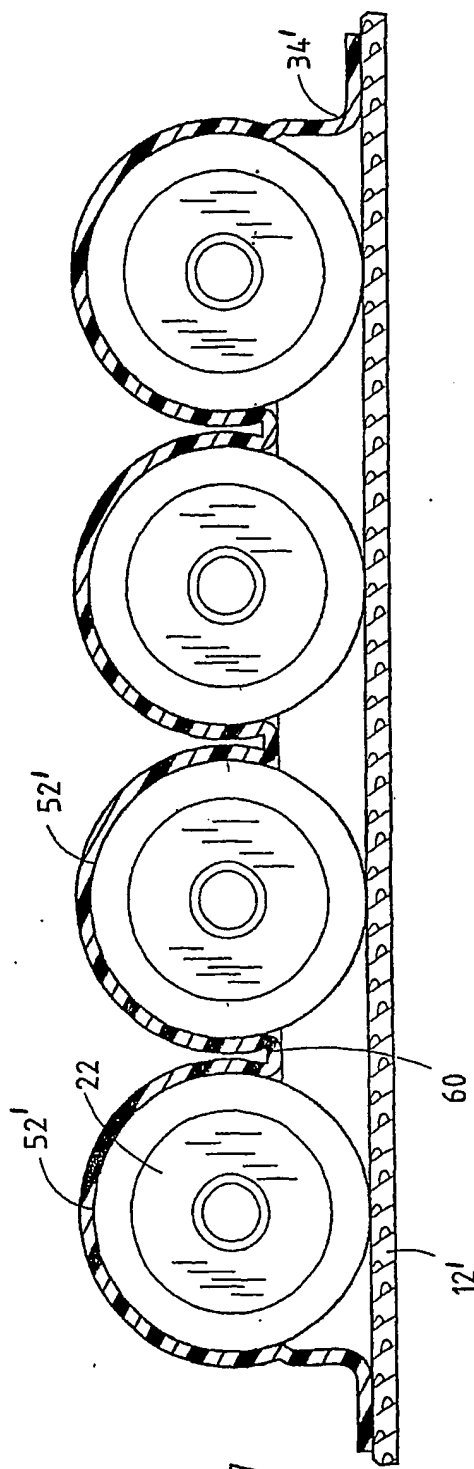


FIG. 7

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